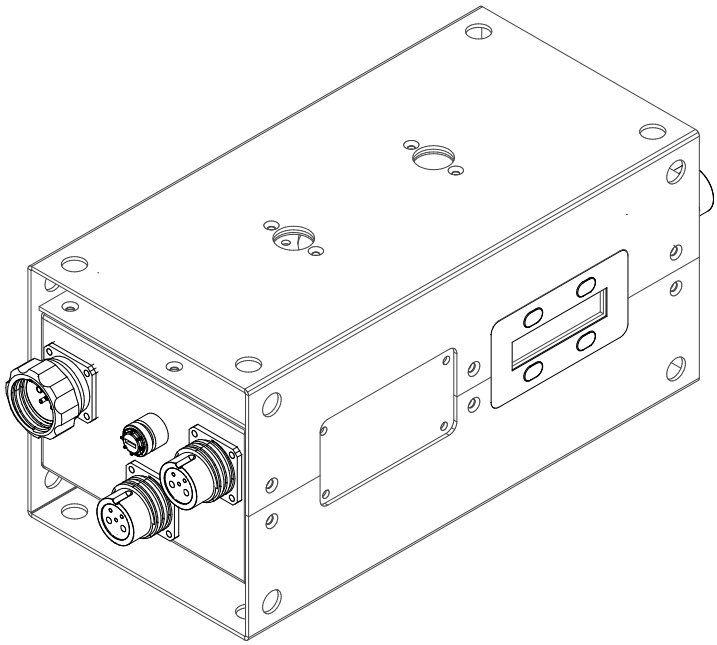
i-PIX

User Manual

BB1 POWERBOX



i-PIX

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SAFETY FIRST

WARNING!
Read the safety precautions in this section before installing, powering, operating or servicing the BB1 & Powerbox

The following symbols are used to identify important safety information in this manual:

Warning!
Safety hazard. Risk of severe injury or death

Warning!
LED light emission. Risk of eye injury

Warning!
Hazardous voltage. Risk of lethal or severe electric shock

Warning!
Fire hazard

! Read this manual before installing, powering or servicing the fixture, follow the safety precautions listed below and observe all warnings in this manual. If you have questions about how to operate the fixture safely, please contact I-Pix.

Warning! Class 2M LED product. Do not look into the beam from a distance of less than 40 cm (16 inches). Do not stare into the beam for extended periods at a short distance. Do not view the beam directly with optical instruments.

This product is for professional use only. It is not for household use. This product presents risks of severe injury or death due to fire hazards, electric shock and falls.

PROTECTION FROM ELECTRIC SHOCK

Shut down power to the entire installation at the building's main power distribution board and lock out power (by removing the fuse for example) before carrying out any installation or maintenance work.

Disconnect the fixture from AC power before removing or installing any cover or part and when not in use.

Disconnect the fixture from AC power before removing or changing the fuse.

Always ground (earth) the fixture electrically.

Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.

Connect this fixture to AC power either using the supplied power cable or via 3- conductor cable that is rated minimum 20 amp, hard usage. Suitable cable types include ST, SJT, STW, SEO, SEOW and STO.

The voltage and frequency at the power outlet are the same as the voltage and frequency applied to the power inlet. Only connect devices to the power outlet that accept this voltage & frequency.

Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.

Do not use the fixture if the power cable or power plug are in any way damaged, defective or wet, or if they show signs of overheating.

PROTECTION FROM FIRE

Do not attempt to bypass thermostatic switches or fuses. Replace defective fuses with ones of the specified type and rating only.

Provide a minimum clearance of 0.1 m (4 in.) around fans and air vents.

Do not modify the fixture

Apart from I-PIX accessories do not stick filters, masks or other materials directly onto the light.

PROTECTION FROM INJURY

Do not hang fixtures from each other. Use two OMEGA clamps per fixture when rigging horizontally.

When suspending the fixture, ensure that the structure and all hardware used can hold at least 10 times the weight of all devices suspended from them.

Use two secondary attachments (such as a safety cable) to secure each fixture. Secondary attachments must be able to hold at least 10 times the weight of all devices suspended from them and must be installed as described in this manual.

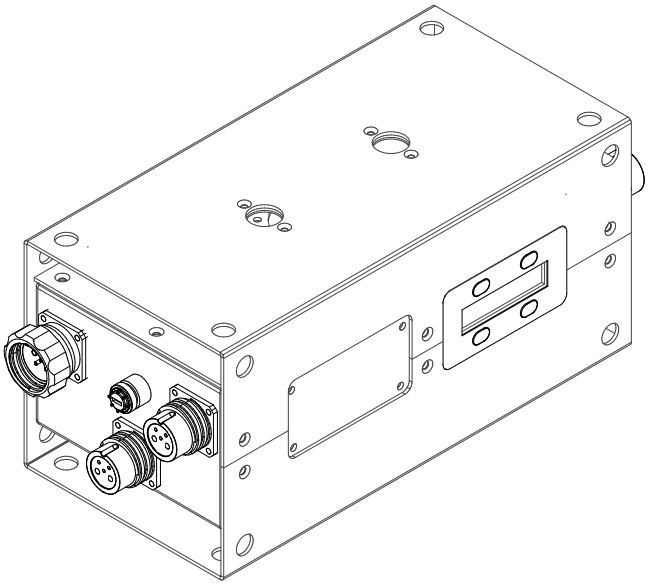
Check that all external covers and rigging hardware are securely fastened.

Block access below the work area and work from a stable platform whenever installing, servicing or moving the fixture.

The LED emission presents a hazard to eyesight at a distance of 4 - 40 cm (1.6 -16 inches) when the eye is exposed to the beam for longer than 0.25 seconds.

Do not look at LEDs from a distance of less than 40 cm (1 ft. 4 in.) without suitable protective eye wear.

Do not look at LEDs with magnifiers or similar optical instruments that may concentrate the light output.



THE BB1 POWERBOX

The BB1 is a compact and versatile instrument available in four beam widths (20°,35°,45°) and the 10° narrow beam BB1

This is a single LED fixture, designed for outdoor and submersible use to 2m (IP 68). It is an RDM device requiring just 15 Volts DC, at 3.6 amps. Full power is 30 Watts at 240 v. For entertainment use there are a choice of power boxes, designed to facilitate quick cable hook up, with an on board user interface enabling quick parameter adjustments.

All the intelligence of the BB1 is in the head of the fixture. for fixed instillation purposes any 15V 5A DC regulated power supply may be used to power the fixture in conjunction with data input that is DMX 512A.

The BB1 offers completely homogenized optics for the smoothest of output It's powerful custom RGB LED light engine has incredible colour mixing capabilities including the effortless sourcing of tungsten and daylight colour temperatures.The BB1 comes with a self contained RDM/DMX digital drive. It can be submerged and comes with a single cable fitted with a high quality 5-pin weatherproof connection

The BB1 can be used independently, e.g. as a truss or a set toner. It is fitted with a dual set of yokes for easy floor mounting or for quick, tool free rigging onto a truss or metalwork in the air.

The BB1 fixtures can be remotely addressed and configured with industry standard RDM (remote device management) DMX, or run as a slave on standard USITT DMX.

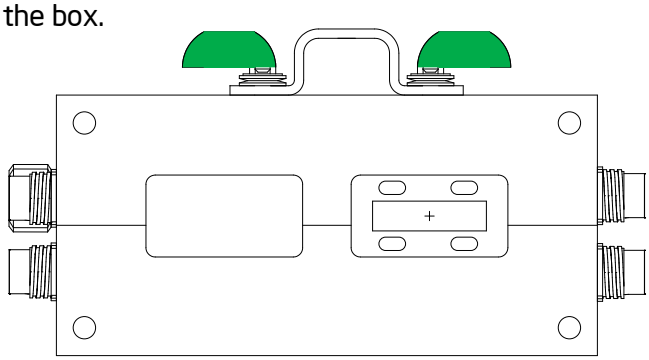
i-Pix new Digital Drive technology is over 90% efficient and delivers even smoother control of the light engines, right down to lowest intensities. True 16 bit control expands the colour range from millions to billions.

In entertainment the BB1 is driven by either a 4 or 6 way powerbox or powerbar.

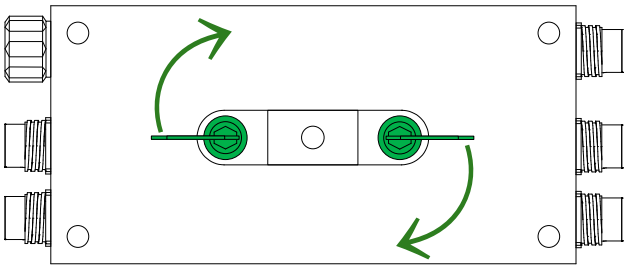
The powerbox and powerbar remotely address the fixtures via RDM DMX or use the onboard user interface which provides both operating mode and address control.Combined power and data input ensures a weatherproof connection, so the power distro can be used outdoors in any orientation.A battery and data inlet connects to an optional battery and show DMX wireless DMX module. Rigging mounts are provided for truss or frame mounting.

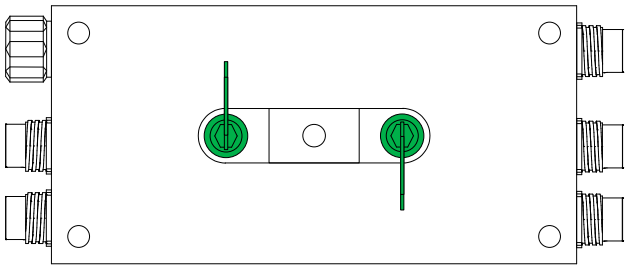
Rigging a BB1 Powerbox

To rig a Powerbox use the OMEGA bracket supplied with the box.
This would have your clamp of choice bolted on to it.

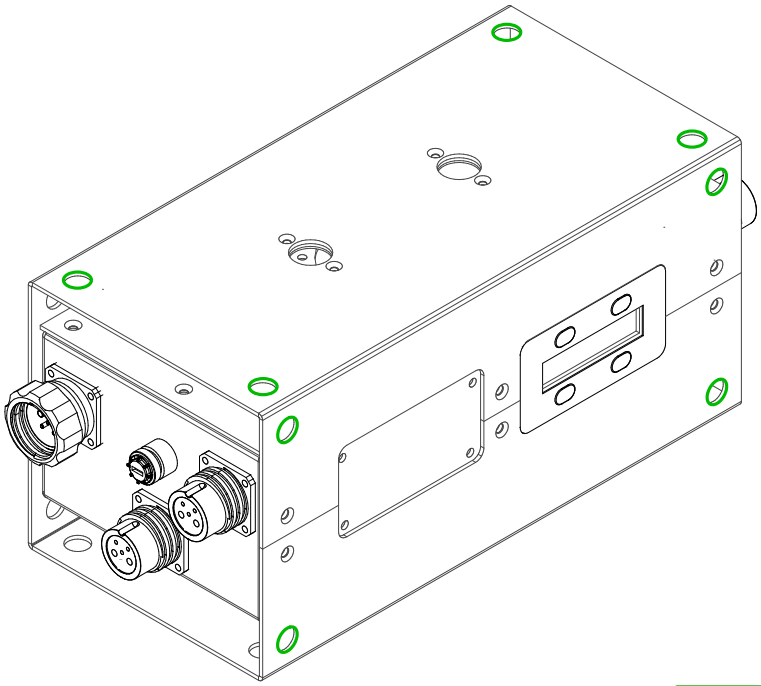


First place the camloc pins in the receptacles either on the top or the bottom of the powerbox with the levers facing out so that a quarter turn clockwise will have them facing in alternate directions as shown.





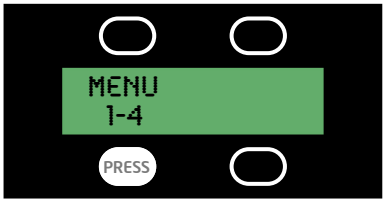
Always secure the Powerbox to the truss,pipe e.t.c. with a safety bond, attached to the box through any of the safety points shown in green.



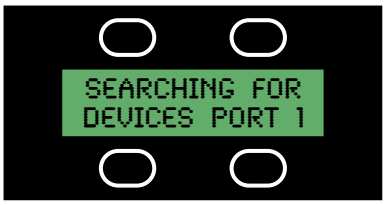
Identifying A Fixture

In order to determine wich fixture you are addressing or changing the mode of, it it may be usefull to " Identify " it. Once Identified the fixture will flash at full until the Identify function is switched off.

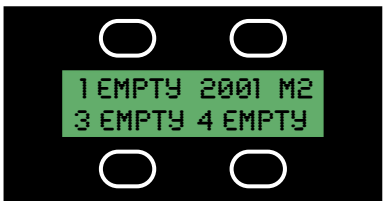
1 Press the 1 - 4 button once.



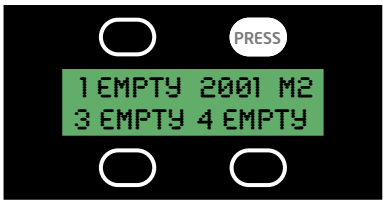
The powerbox will now search out all connected fixtures.



Any fixture connected will be shown as an address and mode beside the port number it is attached to - 2001 M2.
Ports with no attached fixtures will be shown as EMPTY.



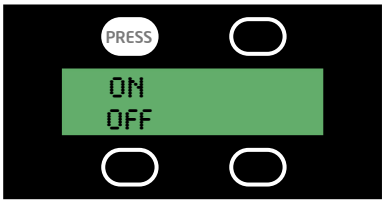
2 Press the button of the fixture you wish to Identify.



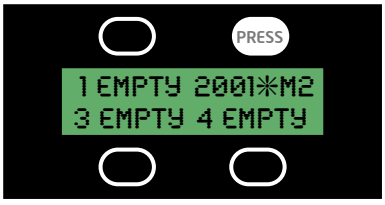
3 Press the IDENTIFY button once.

4 Press the ON button once.

The fixture will start flashing.



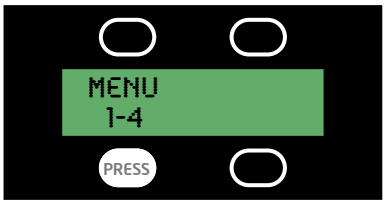
5 Once you have Identified the fixture, press the fixture button once (the one with the star) press IDENTIFY then OFF and the fixture will stop flashing



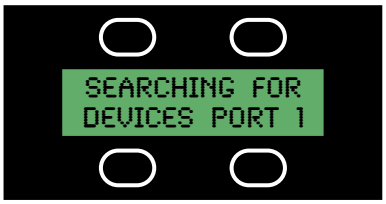
Changing Dimming Curve of A BB 1

The BB1 has the option of using either one of two dimmer curves.
Linear - the output increases directly with the DMX input.
Enhanced - the first 10% of the output is directly controlled over the first 50% of the DMX input.

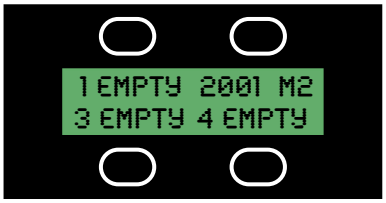
1 Press the 1 - 4 button once.



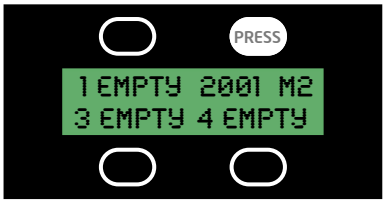
The powerbox will now search out all connected fixtures.



Any fixture connected will be shown as an address and mode beside the port number it is attached to - 2001 M2.
Ports with no attached fixtures will be shown as EMPTY.

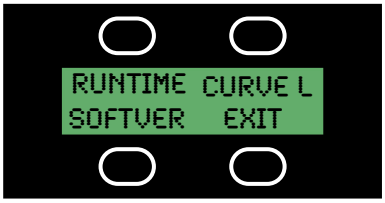


2 Press the button of the fixture you wish to change the Dimmer curve of.

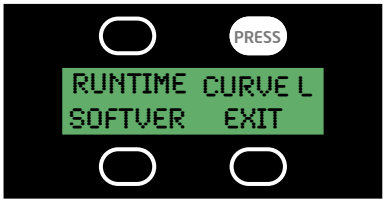


3 Press the MORE button once.

CURVE L shows the dimming curve currently in use - L linear, E enhanced

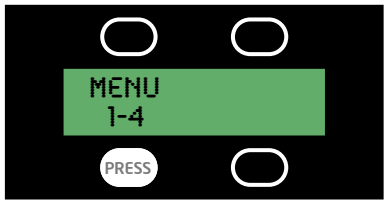


4 Press the CURVE button once to change the dimming curve.

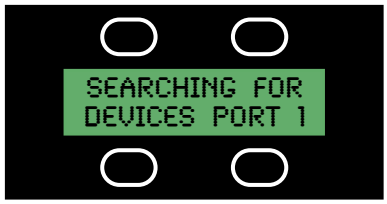


Addressing the BB 1

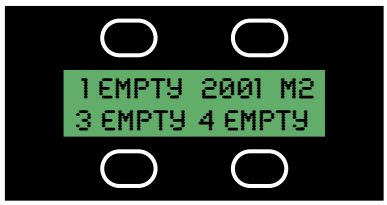
1 Press the 1 - 4 button once.



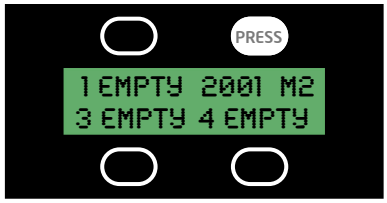
The powerbox will now search out all connected fixtures.



Any fixture connected will be shown as an address and mode beside the port number it is attached to - 2001 M2.
Ports with no attached fixtures will be shown as EMPTY.

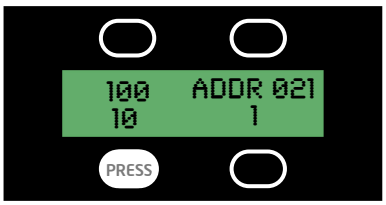


2 Press the button of the fixture you wish to Address.



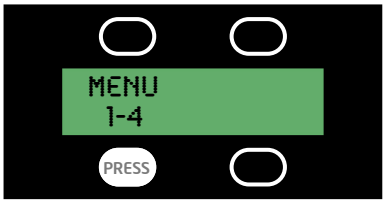
3 Press the address ADDR button once.

4 Use the 1 10 and 100 buttons to create the desired address.

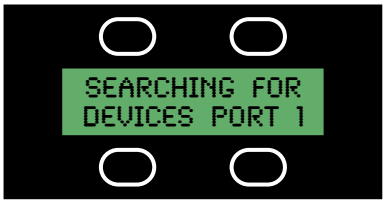


Changing The Mode of A BB 1

1 Press the 1 - 4 button once.



The powerbox will now search out all connected fixtures.



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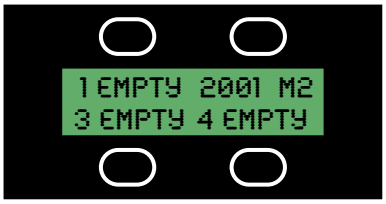
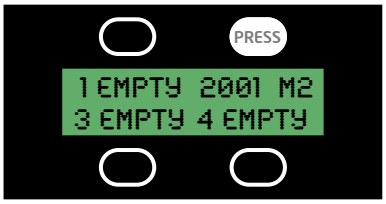


2 Press the button of the fixture you wish to change the Mode of.



3 Press the personality PSNLTY button once

The fixture personality which is the mode the fixture is in, is now displayed

2 mode number

M master intensity
S strobe
R red
G green

5CH number of channels

4 Press the mode button to change the fixture personality

The Operating Modes

The BB1 has 4 different operating modes to suit different uses, programing styles and dmx configurations

MODE 1 - 3 channels 8 bit

The most simple, ideal for fast programing or limited line space and as a node on a media server.

ch1 - red
ch2 - green
ch3 - blue

MODE 2 - 5 channels 8 bit

Ideal for fast programing or limited line space and as a node on a media server with overall dimming and strobe control.

ch1 - master intensity
ch2 - strobe
ch3 - red
ch4 - green
ch5 - blue

MODE 3 - 6 channels 16 bit

Ideal for fast programing or limited line space and as a node on a media server, with a greater resolution over the colours

ch1 - red high byte
ch2 - red low byte
ch3 - green high byte
ch4 - green low byte
ch5 - blue high byte
ch6 - blue low byte

MODE 4 - 9 channels 16 bit

Ideal for fast programing or limited line space and as a node on a media server, with a greater resolution over the colours with overall dimming and strobe control.

ch1 - master intensity high byte
ch2 - master intensity low byte
ch3 - strobe
ch4 - red high byte
ch5 - red low byte
ch6 - green high byte
ch7 - green low byte
ch8 - blue high byte
ch9 - blue low byte

MODE 1
3 channels 8 bit

MODE 2
5 channels 8 bit

MODE 3
6 channels 16 bit

MODE 4
9 channels 16 bit

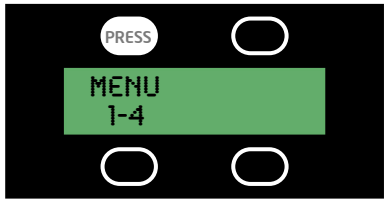
Stand Alone Functions

The BB1 is able to run in stand alone mode without any need of data from a lighting console .
The BB1 is capable of outputting up to 20 programmable memories and 1 chase that can step through these memories.

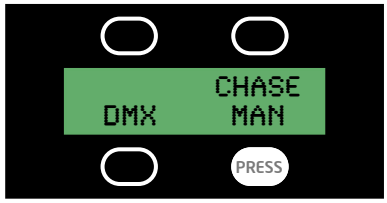
Creating A Memory

When creating a memory make sure all the BB1s plugged into the powerbox are in mode 2, 5 channels M2 5CH and addressed as 001.

1 Press the MENU button once.

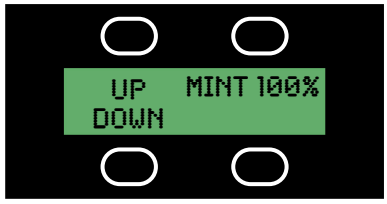


2 Press the manual MAN button once.

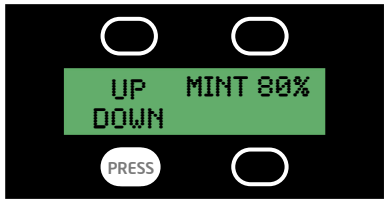


3 Press the program memory PROG MEM button once.

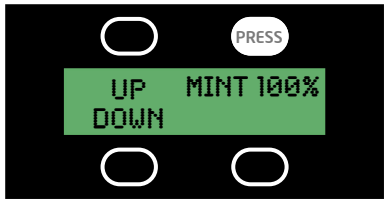
You are now presented with the first variable of your memory wich is the master intensity MINT.
The default value for MINT is 100% - intensity full.



4 if you wish to alter this value use the UP and DOWN buttons to achieve the desired % value.



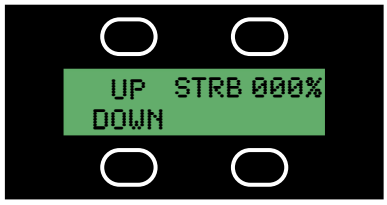
5 When happy with the MINT value press the MINT button once.



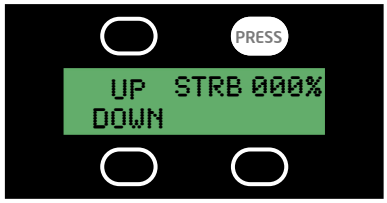
All the BB1s plugged into the powerbox will be treated as one.

Next you are presented with the strobe STRB, the second variable of your memory wich has a default value of 0 % - no strobe.

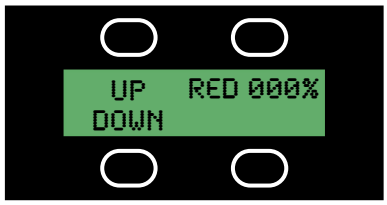
In the same way if you wish to alter this value use the UP and DOWN buttons to give you the desired % value.



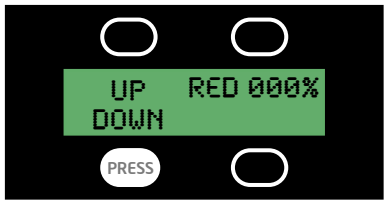
6 When happy with the strobe value press the STRB button once.



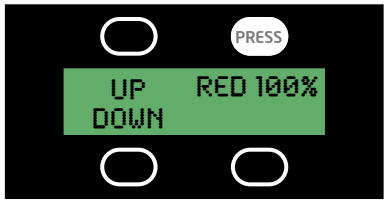
You are now presented with your first colour RED default 0%.



In the same way if you wish to alter this value use the UP, DOWN buttons. to give you the desired %, if you require 100% use the DOWN button.



7 When happy with the red value press the RED button once.

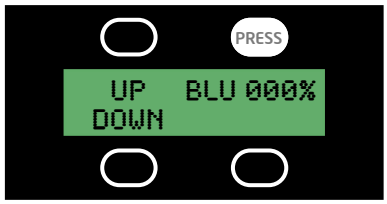


Next you are presented with the second colour green GRN, default 0%.
In the same way use the UP, DOWN buttons to give you the desired % value.
If you require 100% press the DOWN button.

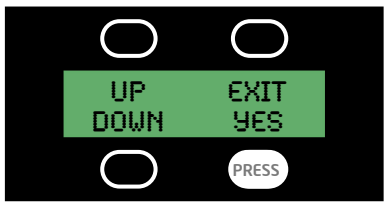
8 When happy with the green value press the GRN button once.

Finally you are presented with the third colour blue BLU default 0%.
In the same way use the UP, DOWN buttons to give you the desired % value.
If you require 100% press the DOWN button.

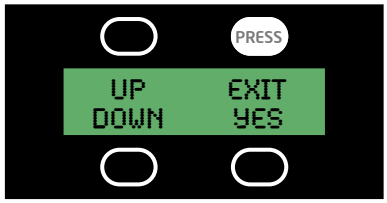
9 When happy with the blue value press the BLU button once.



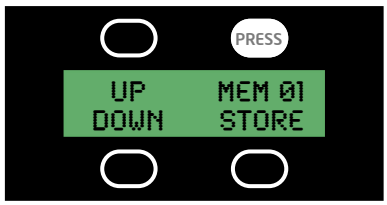
10 If you are happy with the memory and wish to use it straight away press the YES button once.



Next press the MEM 01 button once and you will be returned to the first parameter master intensity MINT and you can reprogram the memory.

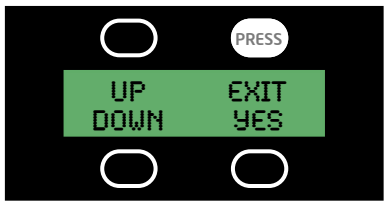


If you are unhappy with the memory you have created and wish to change some of the parameters press the EXIT button once.

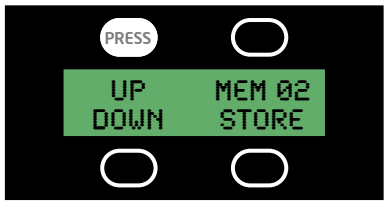


Storing A Memory

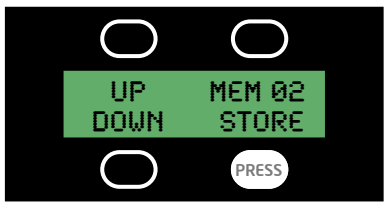
1 When you are happy with the memory you have created - Creating A Memory steps 4 to 9 - and you wish to store the memory, press the EXIT button once.



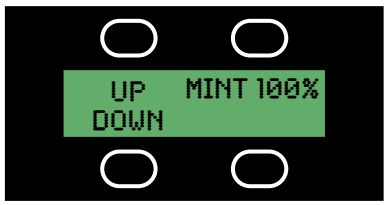
2 Using the UP, DOWN buttons assign the memory a number.



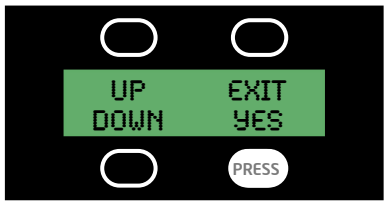
3 When you are happy with the assigned memory number press the STORE button once.



You will now be returned to the first parameter master intensity MINT. Repeat Creating A Memory steps 4 to 9 to create further memories.

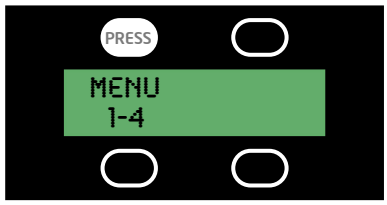


Once you have created and stored all the memories you require, press the YES button to return to the main menu.

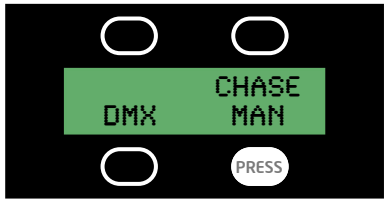


Recalling A Memory

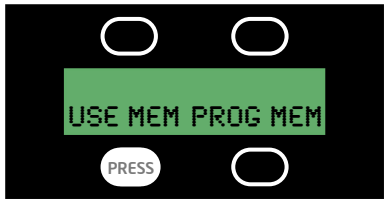
1 Press the MENU button once.



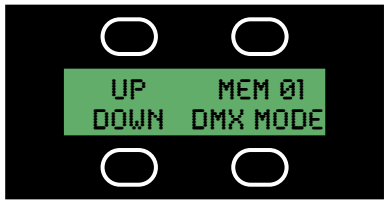
2 Press the manual MAN button once.



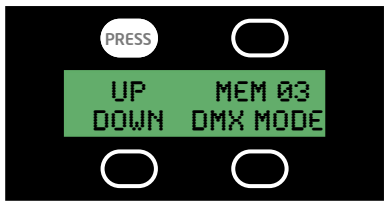
3 Press the use memory USE MEM button once.



Now you will be offered the first memory MEM 01.
This will come on automatically.

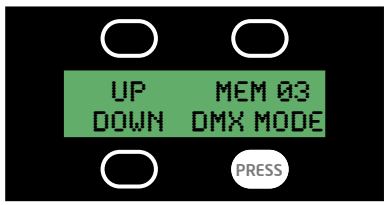


4 Use the UP and DOWN buttons to select the desired memory.
The memories will come on as you scroll through them.

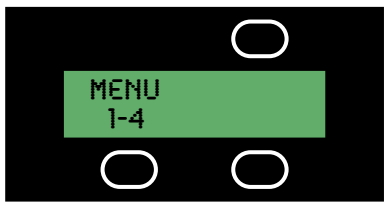


5 To exit the memory (If the unit is receiving dmx) press the DMX MODE button.

If the unit is not receiving dmx then it must be powered down.



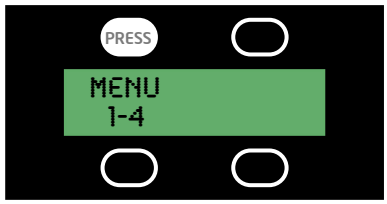
You will then be returned to menu.



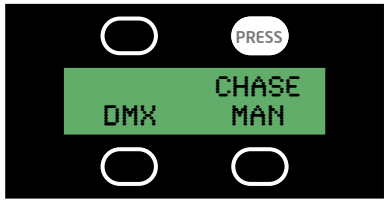
Programing A Chase

1 Ensure you have programed all the memories that will go to make up the steps of your chase.

2 Press the "MENU" button once.

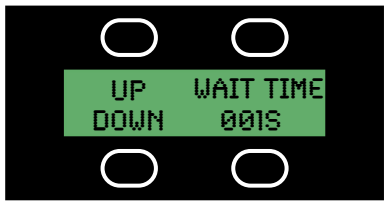


3 Press the CHASE button once.

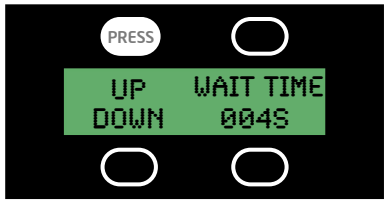


Now the WAIT TIME will appear this is the first parameter of the chase to be set.

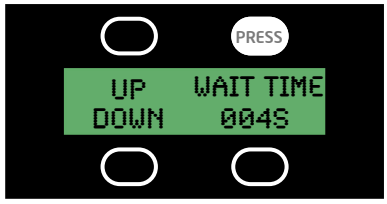
The WAIT TIME is the time period between crossfades that the colour is held constant for.



4 Select the appropriate time (in seconds) using the up down buttons.

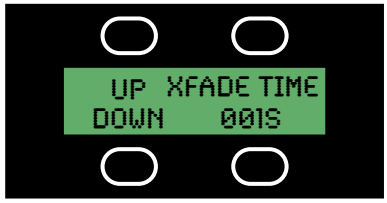


5 When happy with the WAIT TIME press the WAIT TIME button once.

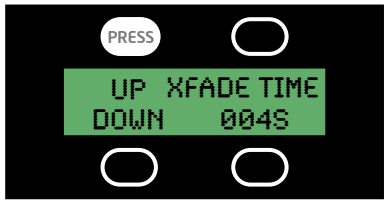


Now the crossfade time XFADE will appear this is the second parameter of the chase to be set.

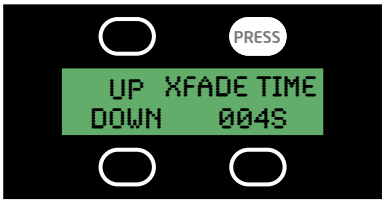
The crossfade time is the length of time the light takes to change from one colour to another.



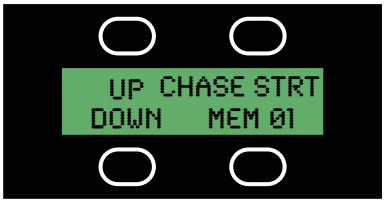
6 Select the appropriate time (in seconds) using the up down buttons.



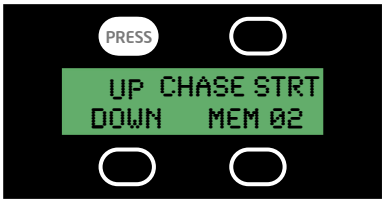
7 When happy with the crossfade time press the XFADE TIME button once.



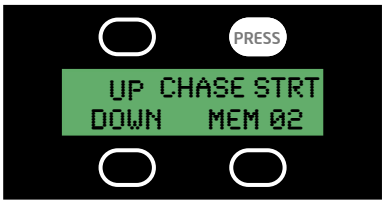
Now chase start CHASE STRT will appear along with the option memory 1 MEM 01
This will be the first step of your chase.



8 Choose which memory you would like to be the first step of your chase using the up down buttons.

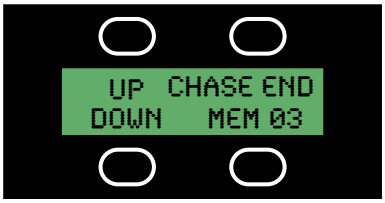


9 Once happy with the memory you would like to be the first step of your chase press the CHASE STRT button.

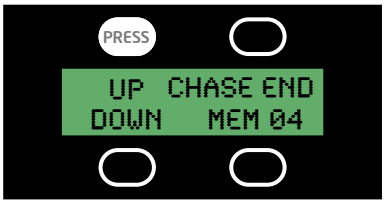


Now CHASE END will appear will appear along with the memory option one memory above the one chosen to start the chase.

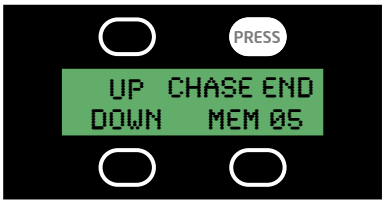
The chase will run through all the memories between the memories in the first and last step.



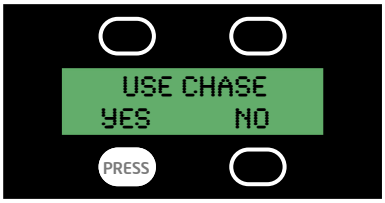
10 Choose which memory you would like to be the last step of your chase using the up down buttons.



11 Once happy with the memory you would like to be the last step of your chase press the CHASE END button.



12 Now you will be offered the option USE CHASE if you wish to simply press YES.



The interface will now say CHASE RUNNING.
When you wish to end or change the chase press MENU.

If you leave a chase running when the the powerbox is powered down,the chase will resume as soon as the powerbox powered back up again.

Powerbox Technical Specifications

Dimensions:

▪ Length	290 mm
▪ Height	140 mm
▪ Width	142 mm
▪ Weight	3Kg

Mechanical design & materials:

▪ Box	folded and welded steel
▪ Finish	Electro static powder coated black satin

Rigging:

▪ Style	4 ¼ turn camloc fasteners
▪ Number of positions	2 rigging locations Note: unit comes with an Omega rigging bracket to accept 12mm bolts,

Electrical:

▪ Input	90- 265 Volt 50/60 Hz
▪ Current	0.5 amps @ 240 volts
▪ Power	60 watts total power on full @ 240 volts
▪ Fuse	20mm x 5mm slow blow 2 amp
▪ Input	chassis mounted IP67 6 pin (Combined power and data connection)
▪ Through Output	chassis mounted female IP67 6 pin (Combined power and data connection)
▪ Low Voltage Output	4 x chassis mounted IP67 5 pin (Combined low voltage power and data connection) Note; units comes complete with 16 amp plug and 5 pin male.

Control:

▪ User interface	weatherproof backlit lcd display with four membrane switches
▪ Data type	USITT DMX512-A & RDM DMX

Thermal characteristics:

	force air cooled via low airflow/ low noise fans
▪ Operating temperature	Minimum: -20 degrees C, Maximum:+ 46 ° C

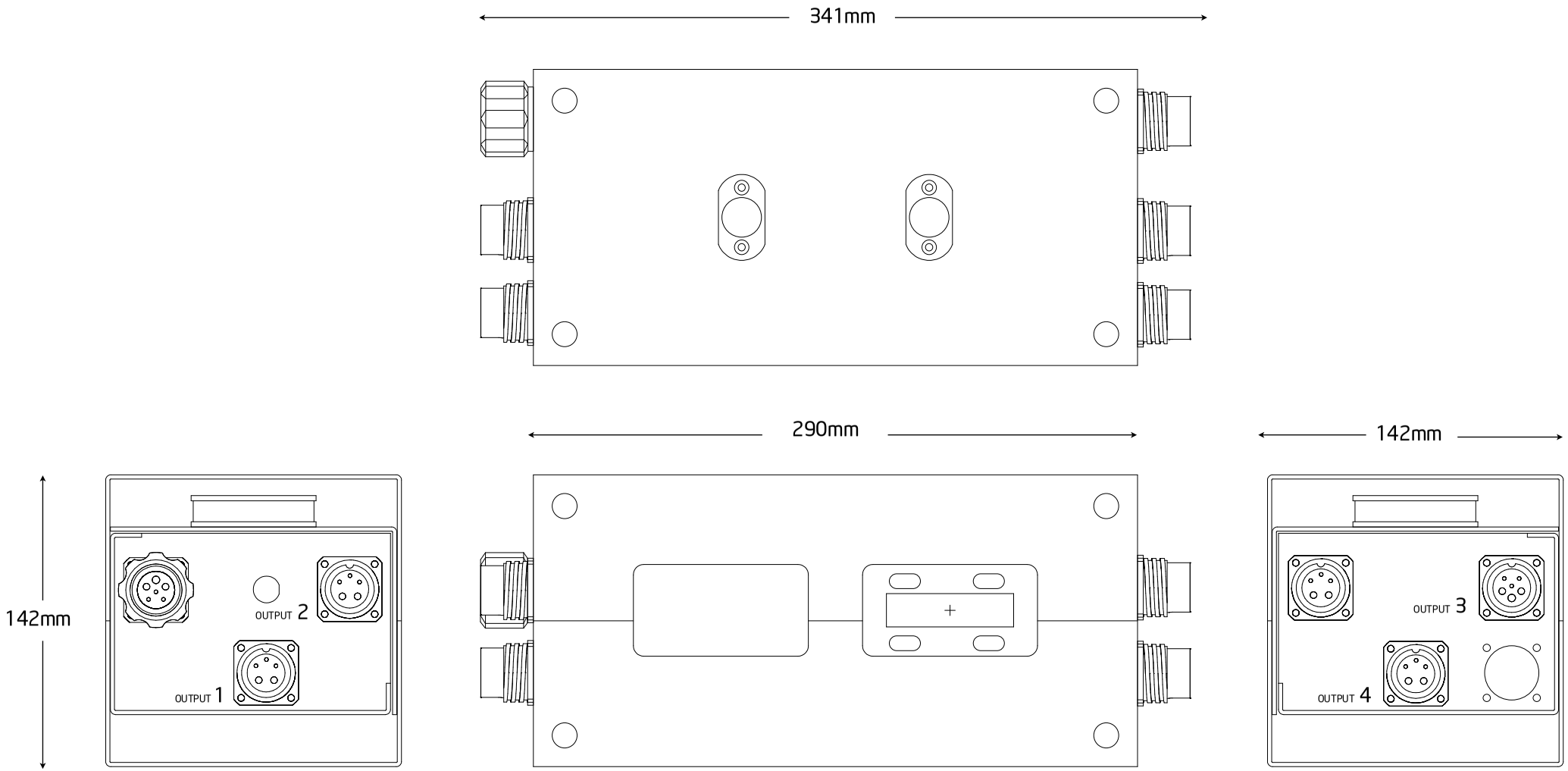
Weather protection:

	Rated to IP65
▪ Humidity max	20% ~ 90% RH non-condensing

Approvals & Compliance:

BS EN 55103-1	Harmonics
BS EN 55103-2	Immunity
BS EN 61000-3-2	Emissions
USA / Canada	ETL pending

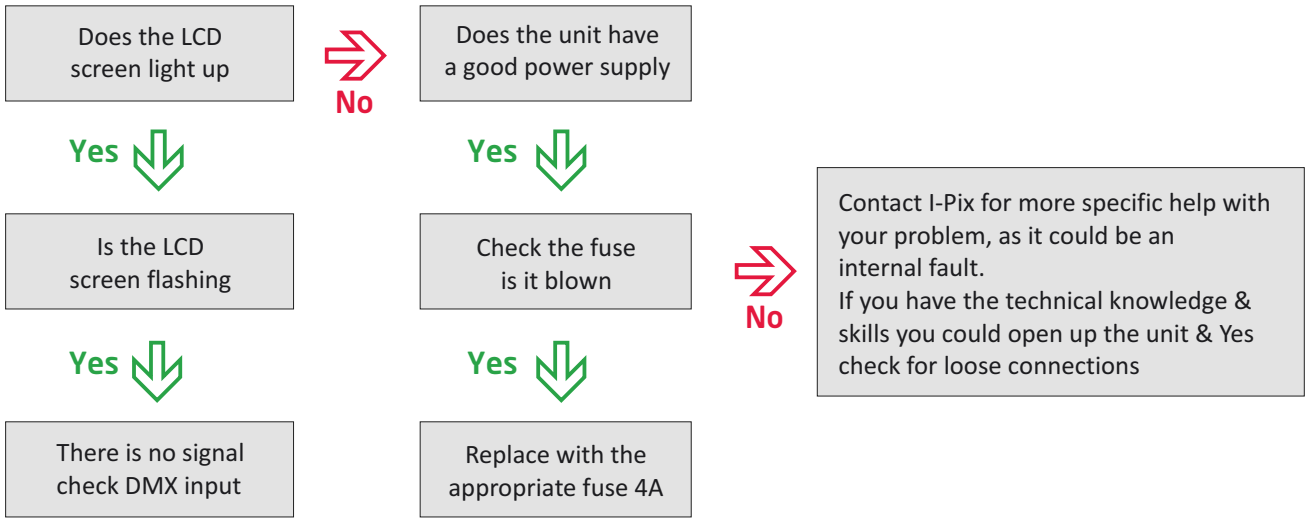
Powerbox Dimensions



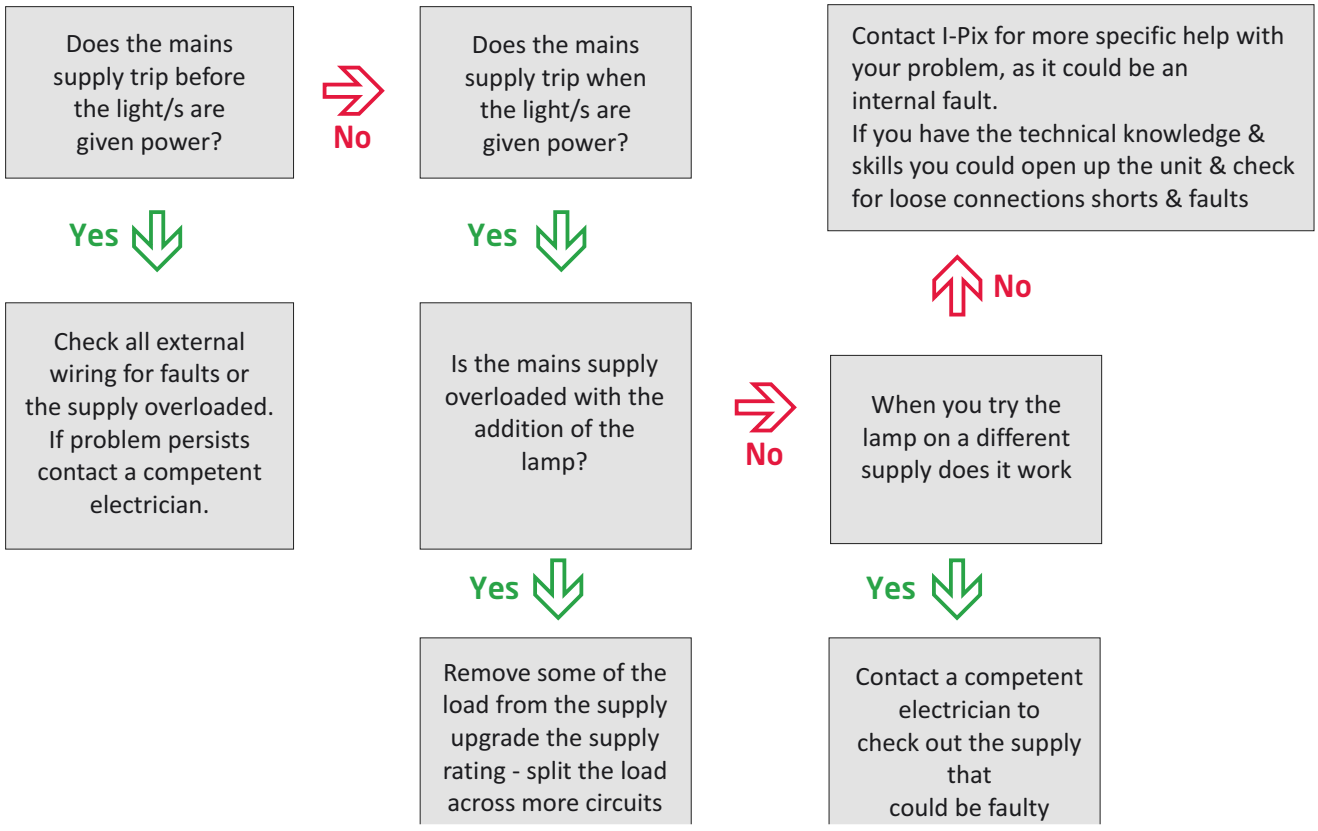
TROUBLE SHOOTING

DISCLAIMER: Please note that the information contained in this trouble-shooting guide is generalized in nature & cannot account for all possibilities. Any proposed remedies for specific situations should not be considered as absolute or all encompassing. Please seek professional assistance if there is any doubt as to the efficacy of a remedy or of the exact nature of any encountered problem. I-pix provides the information contained herein only as a guide.

No response from the light


Does the LCD screen light up
No
Does the unit have a good power supply
Yes
Yes
Is the LCD screen flashing
Check the fuse is it blown
No
Contact I-Pix for more specific help with your problem, as it could be an internal fault.
If you have the technical knowledge & skills you could open up the unit & Yes check for loose connections
Yes
Yes
There is no signal check DMX input
Replace with the appropriate fuse 4A

Mains supply keeps tripping out blowing fuses:


Does the mains supply trip before the light/s are given power?
No
Does the mains supply trip when the light/s are given power?
Contact I-Pix for more specific help with your problem, as it could be an internal fault.
If you have the technical knowledge & skills you could open up the unit & check for loose connections shorts & faults
Yes
Yes
No
Check all external wiring for faults or the supply overloaded. If problem persists contact a competent electrician.
Is the mains supply overloaded with the addition of the lamp?
No
When you try the lamp on a different supply does it work
Yes
Yes
Remove some of the load from the supply upgrade the supply rating - split the load across more circuits
Contact a competent electrician to check out the supply that could be faulty

TROUBLE SHOOTING

The fuse on a unit repeatedly blows

- Are you fitting right rating/type of fuse into unit?
- Contact I-pix for more specific help with your problem, there may be an internal fault in the unit.
- If you have the technical knowledge/skills you could look inside the unit and check the internal wiring for a lose connections/shorts and also the power supply is working with a 15v output when there is no load connected to it.

Dmx trouble shooting

The obvious

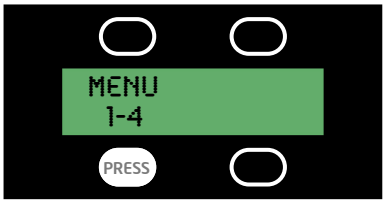
- It is good practice to connect data line and terminate before switching on device.
- Is the dmx line fitted to a buffer and data is being received
- Is the dmx data line fitted with a line termination?
- Does the unit's dmx mode set-up match the personality/ profile for the console provided?
- Note: the LCD screen flashes intermittently when no data is present

Lamp Information Software Version

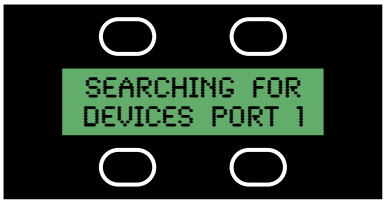
The BB1contains some usefull internal information, RUNTIME and SOFTVER.

Software version SOFTVER shows the software version the lamp is running

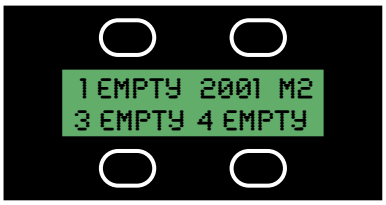
1 Press the 1 - 4 button once.



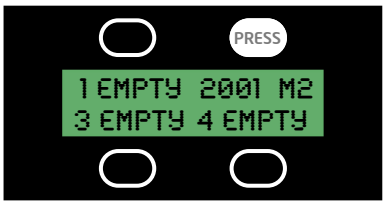
The powerbox will now search out all connected fixtures.



Any fixture connected will be shown as an address and mode beside the port number it is attached to - 2001 M2.
Ports with no attached fixtures will be shown as EMPTY.

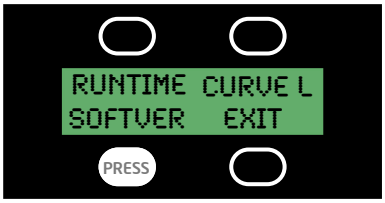


2 Press the button of the fixture you wish to change the Mode of.

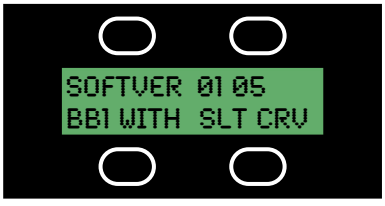


3 Press the MORE button once.

4 Press the SOFTVER button once.



01 05 is the version of software the lamp is running

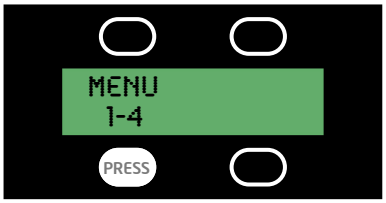


Lamp Information Runtime

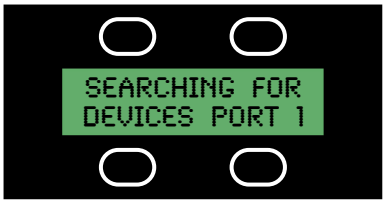
The BB1contains some usefull internal information, RUNTIME and SOFTVER.

RUNTIME lets you know how long each individual L.E.D. has been running as well as how long the lamp as a whole has been running.

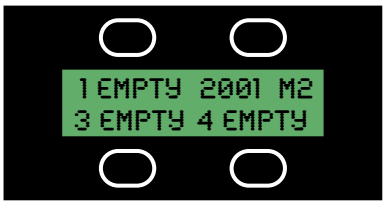
1 Press the 1 - 4 button once.



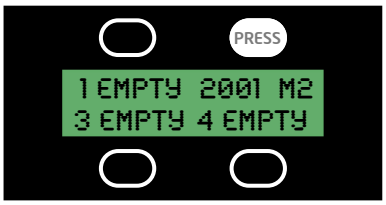
The powerbox will now search out all connected fixtures.



Any fixture connected will be shown as an address and mode beside the port number it is attached to - 2001 M2.
Ports with no attached fixtures will be shown as EMPTY.

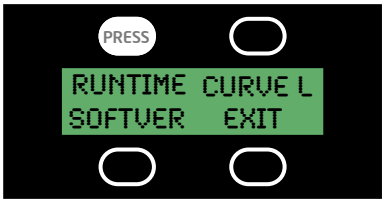


2 Press the button of the fixture you wish to change the Mode of.

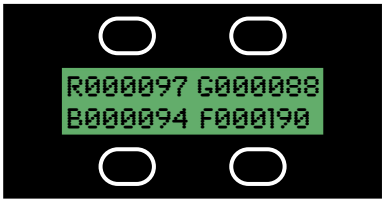


3 Press the MORE button once.

4 Press the RUNTIME button once.



You are now shown the time in minutes the individual L.E.D.s have been on.
R - red, G - green, B - blue.
F shows the time in minutes that the lamp has been on as a whole.



RoHS AND WARRANTIES

I-PIX BB1s COMPLY WITH RoHS RESTRICTIONS

I-PIX BB1 s are compliant with all of the criteria proposed by the European RoHS directive 2002/95/EC for hazardous material content in electronic and electrical equipment as listed in Annex 1A and 1B of the WEEE Directive.

In addition to containing no mercury, the LED light engines have the following environmental advantages over traditional light sources:

- High energy efficiency
- Long lifetime
- Fully dim-able
- Very low IR and UV radiation

For attachment of electrical connections I-Pix use lead free solder

WARRANTY STATEMENT

I-Pix (seller) extends warranty on all the electronics in the BB1 produced by the Seller for two (2) years from original date of shipment, that the goods sold hereunder are new and free from substantive defects in workmanship and materials. This warranty extends only to the Buyer and not to indirect purchasers or users . Sellers liability under the foregoing warranty is limited to replacement of goods or repair of defects or refund of the purchase price at the Sellers sole option. The above warranty does not apply to defects resulting from the improper or inadequate maintenance, unauthorized modification, improper use or operation outside of Sellers specifications for the product, abuse, neglect, or accident. THE ABOVE WARRANTY IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. I-PIX SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE - I-PIX Jan 01, 2009

WARRANTY STATEMENT

I-Pix (seller) extends warranty on all the L.E.Ds in the BB1 produced by the Seller for one (1) year from original date of shipment, that the goods sold hereunder are new and free from substantive defects in workmanship and materials. This warranty extends only to the Buyer and not to indirect purchasers or users. Sellers liability under the foregoing warranty is limited to replacement of goods or repair of defects or refund of the purchase price at the Sellers sole option. The above warranty does not apply to defects resulting from the improper or inadequate maintenance, unauthorized modification, improper use or operation outside of Sellers specifications for the product, abuse, neglect or accident. THE ABOVE WARRANTY IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. I-PIX SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE - I-PIX Jan 01, 2009

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